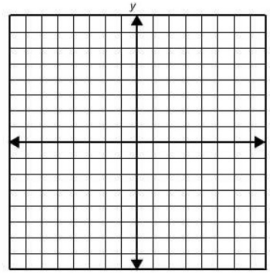


standard

1.) Graph $y = x^2 - 8x + 7$
 $a = 1$ $b = -8$ $c = 7$

Axis of symmetry: _____
Vertex: _____
Vertex Form: _____
Direction of Opening: _____
y-intercept: _____
x-intercepts: _____, _____



standard

2.) Graph $y = x^2 - 2x + 3$

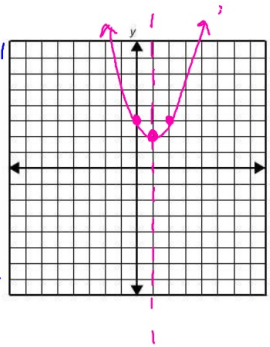
$a = 1$ $b = -2$ $c = 3$
 $x = \frac{-b}{2a} = \frac{-(-2)}{2(1)} = \frac{2}{2} = 1$
Axis of symmetry: $x = 1$
Vertex: $(1, 2)$ $(1^2 - 2(1) + 3) = 2$
Vertex Form: $y = (x - 1)^2 + 2$
Direction of Opening: up $a > 0$
y-intercept: $(0, 3)$
x-intercepts: none none

yint: $x = 0$

$y = (0)^2 - 2(0) + 3$
 $y = 3$

xint: $y = 0$

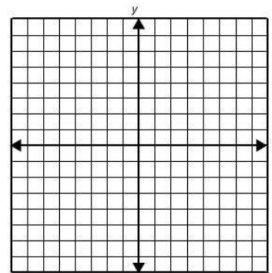
$0 = x^2 - 2x + 3$
not factorable



vertex

3.) Graph $y = \frac{1}{2}(x + 2)^2 - 8$
 $a = \frac{1}{2}$ $h = -2$ $k = -8$

Axis of symmetry: _____
Vertex: _____
Direction of Opening: _____
y-intercept: _____
x-intercepts: _____, _____



vertex

4.) Graph $y = -2(x - 4)^2 + 6$
 $a = -2$ $h = 4$ $k = 6$

$x = h$ Axis of symmetry: $x = 4$
 (h, k) Vertex: $(4, 6)$
Direction of Opening: down $a < 0$
y-intercept: $(0, -26)$
x-intercepts: $(5.7, 0)$ $(2.3, 0)$

yint: $(x = 0)$

$y = -2(0 - 4)^2 + 6$
 $y = -26$

xint: $(y = 0)$

$0 = -2(x - 4)^2 + 6$
 $-6 = -2(x - 4)^2$
 $\frac{-6}{-2} = \frac{-2(x - 4)^2}{-2}$
 $3 = (x - 4)^2$
 $\sqrt{3} = \sqrt{(x - 4)^2}$
 $\sqrt{3} = x - 4$
 $\sqrt{3} + 4 = x$
 $x = 5.7$

